

Vigyan Ashram Status Report

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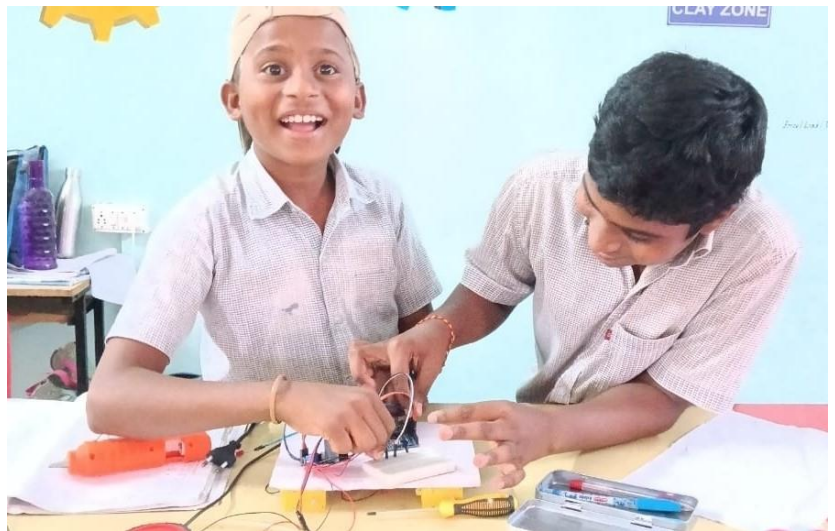
February 2024

In this issue

- Atal Tinkering Lab (ATL) students Make-a-thon in Andra-Pradesh & Karnataka
- Faculty Development Program (FDP) for Engineering college Professors at Pabal
- Project kick off meeting of TAP_RISE project
- MSBVET examination & DBRT skill training updates

A] Make-a-thon for ATL teachers and students @ Andra-Pradesh & Karnataka:

We are conducting Make-a-thon for team of ATL teachers and students at multiple places. Objective is to help them understand 'Design Thinking Process' and make projects in ATL. In this month, four Make-a-thons were conducted in Andra-Pradesh and one at Puttur in Karnataka. Team of teachers and students worked as a team to identify problem statement, build a prototype by using digital fabrication tools. They documented their work. Total 209 students-teachers from 23 Andra-Pradesh and 4 schools from Karnataka participated in this Make-a-thon. (UNICEF ATL)



B] Faculty Development Program (FDP):

A 5 days residential training program for college faculties was conducted from 12th to 16th February at Pabal. Training was organized in collaboration with Maharashtra State Faculty Development Academy (MSFDA). It was based on the theme of '**Seed the Change: Vigyan Ashram approach in design thinking, innovation & entrepreneurship**'. Total 19 professors, mainly from technical stream (Engineering / Design) participated in the training. They worked in team to learn Design Thinking concepts like empathy, problem identification and definition, prototype building etc. through hands-on learning activities. Our



FDP workshop snapshots

alumni and Startups entrepreneur Mr. Siddhesh Sakore (Agro-rangers), Ms. Kalyani Chavali (Sahrudaya foods), Mr. Mahesh Shinde (Pratheen Eco

Solutions) shared their experiences on the journey of their entrepreneurship in relation to innovation & design-thinking learnings.

This is the first time, Vigyan Ashram has conducted residential training for college faculties from higher education institutes. (VATF)

C] TAP-RISE project inception & technology development updates:

An online project inception meeting for Department of Science & Technology (DST-SEED division), supported by Technology Acceleration Platform for Rural Innovation & Social Entrepreneurship (TAP-RISE) was conducted on 22nd February. Meeting was organized by Vigyan Ashram & Development Alternative (DA) to introduce project objectives & planned activities to DST SEED supported organisations. Dr. Anuradha Pughat (DST) and Dr. Yogesh Kulkarni presented overall project objectives and planned activities for participants. The meeting was attended by 15 social-research organization's senior executives. It's decided to select few technologies and prepare scaling up plan for them.

D] Technology Development:

i) Red-Chilly dryer: After analysing results for the experiments conducted at Nasik, Prasad and Abhijit started experiment 'To study water-evaporation rate with respect to air-flow in dome-dryer'. They are using 1 M diameter dome-dryer for drying. They are using green-chili or water saturated saw-dust for conducting trials. Details of trials can be found - <https://vadic.vigyanashram.blog/2023/11/07/solar-chilli-dryer/>



ii) Black-Soldier-Fly (BSF) based composting & poultry farming:

- In the month of February, 3.758 ton of wet waste was processed using BSF at Rajgurunagar dumping ground & Janki Rainbow Society (Pune).
- BSF breeding chamber: Mahesh & Abhishek completed fogger, heating bulb installation and side wall construction work. They are planning to start BSF egg production by the end of next month.
- Sahil successfully tested BSF larvae separator with 95 % separation rate. It is hand-operated rotating drum with double-layer sieve for larvae & compost separation. Machine will be motorized after field-trials.
- Bhanudas started using BSF larvae (BSFL) as a feed for deshi-poultry birds. For the first 3 weeks, birds (average weight 638 gm) were fed on regular poultry feed. From 4th week onwards, control and experimental trials were started. Control (100 % poultry feed) and Experimental treatment (50 % feed + 50 % BSFL) were conducted for 30 days. The average weight of Experimental group was 1345 gm (FCR-4.59) while for control it was



Bamboo house for poultry

1215 gm (FCR-2.79) during 30 days. This shows better weight gain and FCR for 50 % BSFL replacement in poultry feeding.

- Ganesh & Ranajeet conducted backyard poultry awareness camp for tribal Women Self Help Group (WSHG) associated with Shashwat NGO in Dhimbe region of Ambegaon block of Pune region. Nearly 180 tribal women attended training workshop.
- Twenty farmers started backyard-poultry farming (600 birds) at Pasli region of Velha block (Pune). Ganesh & Ranajeet conducted on-field training program twice for them on 7th & 29th February. Training on poultry technologies like bamboo housing, vaccination, feed management etc. was provided to participant farmers.

iii) Polyhouse climate control system development:

Ranajeet & Yogesh visited Research Foundation Park, Savitribai Phule Pune University (SPPU) on 9th February to meet Dr. Arvind Shaligram & Dr. Pooja Doshi. We are planning to use polyhouse on the terrace of chemistry dept. for experiments on climate control & pest-prediction system of polyhouse farming.

iv) Fab academy students have completed assignments on CAD modelling, Laser & Vinyl cutting and Electronics production.

v) Abhishek Pisal and Sahil Chavan (Agril BTech) successfully completed their four months internship. Abhishek worked on BSF breeding chamber while Sahil designed BSF larvae separator.

vi) Ms. Sakshi Patale (BE, Electronic, N.K. Orchid Engineering College, Solapur) and Siddhant Said (BE Production, AISSMS, Pune) joined under DIC internship program.



Abhishek and Sahil completed their internship

E] DBRT updates:

i) MSBVET examination: Maharashtra State Board of Skill, Vocational Education & Training (MSBVET) certificate examination was held on 15th & 16th February. 37 students appeared for certificate course exam in electrical, welding workshop, food processing and solar PV installation subject.

ii) GMRT Science-day Exhibition: DBRT student Satish & Sidhanth participated in two days annual science exhibition on 28th & 29th February organized by Giant Metro-wave Radio Telescope (GMRT) Khodad (Pune). Students exhibited projects like polyhouse climate control system, low-cost UV filter, food products in the exhibition.



MSBVE exam

iii) Workshop section: Students made four office table for DIC section. Total cost of 4 tables was Rs.53,116/- (including labour charges of Rs.10,000/-). Students also fabricated a product-showcase for EDP section with total cost of Rs.46,230/- (including labor charges Rs.7,300/-). Apart from this, students also did fabrication & plumbing of BSF breeding-chamber and repairing of toilets in DIC hostel. Total value of community service provided in February was Rs. 77713/-.

iv) Energy & Environment: Students of electrical section carried out wiring work in new soil-microbiology section. Total cost of work was Rs.15,226/-. Students also carried out maintenance of solar water heater and replaced two vacuum-tubes as a regular maintenance work. During February, three new students took admission for motor-rewinding short-term course.



Solar water heater maintenance

v) Home & Health section: In food processing, students learnt sugar-syrup based

preservation while making papaya-candy, jam and peanut-chikki. Students operated bakery while processing 74 kg flour for making of bread, khari, veg-puff, cookies etc. Students also arranged food-stall in Pabal-Yatra on 22 & 23rd February. Total value of their community service was Rs. 32,351/-.

vi) Agriculture & Animal husbandry section: Students harvested 21 kg brinjal, 7.5 kg capsicum, 7.7 kg spinach and 2 kg green-chilly. They learn skills in seed treatment, plant-population calculation & planting, fertilizer application, pest-management etc while working in the fields. Apart from regular farming activities students learnt use of 'poultry egg incubation' and hatched 30 poultry eggs. They got 91% hatching rate.

vii) CNC training: CNC machine is installed in the workshop. Prasad & Bhushan visited AISSMS, IOIT college of engineering (Pune) on 27th Feb to get guidance from CNC training expert. We are engaging professional on visiting basis to give initial training on CNC operations.

FJ IBT Maharashtra & Uttar-Pradesh updates:

i) IBT Head-Master's (HM) meeting: The meeting of 10 IBT school HMs was conducted on 16th February at Adarsh Vidyalaya Talegaon-Dhabhade. These schools are getting financial support from Schaeffler India CSR in Talegaon region of Pune district. IBT activities, implementation challenges and administrative issues were discussed in the meeting along with plan of action for upcoming educational year. HMs also discussed measures to be taken for increasing community service activities for program sustainability.



ii) Edu Conclave Conference: Komal Raut and Archana Shinde attended Edu-Conclave-2024 organized by Pune Knowledge Cluster (PKC) on 27th February at IISER, Pune. They presented IBT program in the conclave.

iii) Atal Tinkering Lab (ATL) Marathon 2024: This year, 24 IBT schools participated in ATL marathon-2024. They had submitted their project ideas and prototypes based on real-life community need in the areas of farming, wild-animal conflict, energy saving etc.

iv) Students learning activity:

- A scrap rally: IBT students in Salumbre, Navlakh-Umbre, Shivali school organized a 'scrap-collection' rally in their respective villages. Students appealed villagers to hand-over up-cyclable scrap items like home-appliances, metal waste, bicycles etc for using it for learning activities.

- Home & Health section, students in Kohinde & Salumbre schools put up a food stall at the farewell function for 10th class students. Students earned community service of Rs.21680/-.

- IBT Students from Shri. Bhairavnath Vidyalaya, Vahangaon (Pune) completed electrical wiring work of their new computer laboratory. Students earned Rs.1,540.00/- from community service.

- Students of IBT chikhali schools (Pune) repaired 80 classroom benches in the school with help of their school instructor. Total value of their work was Rs.7,000/-

- Students of V. P. Utarksha Madhyamik Shala Waghera (Nashik) completed installation of electrical, workshop & home & health section for their newly starting IBT program.

- Padsare IBT school (Raigad) students organized a science exhibition on 28th February on the occasion of national science day. Engineers from Afcons Infrastructure Pvt. Ltd. volunteered in the science exhibition.



IBT activities in schools



Learning by Doing activities in UP schools

Learning by doing (LBD) @ Uttar-Pradesh updates (STARS Forum):

- A training video for instructors was shot on 'Making of Peanut-Chikki' on 8th & 9th February by Samagra Shiksha Abhiyaan (SSA). Similar video tutorials will be made for other LBD activities in coming days.
- UNICEF arranged video-shoot for documenting students & instructors feedback on LDB program at Kanpur on 10th February and at Agra 15th February.

NEP-CAG meeting:

Dr. Yogesh Kulkarni attended meeting of Curricular Area Group on vocation education at New Delhi from 14th – 16th Feb.

Yogesh is appointed on committee by NCERT to form Syllabus Bridge Course Development Group (SBCG) for Curricular Transition Plan (CTP) for class 6th std.

G] Entrepreneurship Development Program (EDP) update (VATF):

Exhibition: EDP team participated in Ehsaas NGO Exhibition-2024 organized by SPJIMR institute of management, Mumbai during 15th to 17th February. Ganesh, Pranay and Pramod Pansare (Ashirwad Foods, Pune) exhibited various food products made by DBRT students prepared food products. They sold food products worth Rs. 9,000/- during 2 days exhibition.

Field visits & mentoring support:

- Ganesh visited food product trading unit of Mrs. Pushpalata Mahajan (Prop. Hansita Gruh-Udyog). Mrs. Pushpalata is student of our millet processing training and wish to start Jawar & Nachani processing unit. Ganesh guided them in raw material procurement, marketing and fundraising.
- Yogesh visited Mr. Dinkar Shinde (Foot-Massage Centre, Pune) and Mrs. Jayashree Bathe (Milk Processing unit Talegaon Dabhade) on 17th February for on field incubation support.
- Ganesh met Kisan Pande (Ex-IBT instructor & essence sticks manufacturer) at Chikhalgaon, Dapoli to inquire about his entrepreneurial progress.
- Enterprise registration support was provided to 5 budding entrepreneurs (Udyam certificate - 4 and PAN card registration - 1).



Nitin Pimpalkar

Hero of the month:

Mr. Nitin Pimpalkar started furniture business with name of "Shree Samarth krupa furniture" At-Chikhalgaon, Tal-Dapoli, Dist-Ratnagiri. He is providing sliding-windows and metal furniture manufacturing services in Dapoli region. Nitin is IBT school instructor alumni and also getting incubation support through EDP.

H] Atal-Tinkering-Lab (ATL) & DIY lab update:

i) Low-Cost-Maker (LCM) labs are installed in 22 schools of Andhra-Pradesh & Karnataka in the month of February.

ii) A technical mentoring is provided for SEED the Future Entrepreneur and ATL marathon competitions.

iii) A science exhibition was organized at AITAM (Aditya Institute of Technology and Management, Tekkali. Srikakulam Dist, AP) on 28th February. Total 23 ATL labs from Srikakulam district attended this exhibition with 69

students & instructors. Students displayed their science project made using ATL lab facility.

iv) A 3 days ATL membership program was conducted for Hub labs of Vizianagaram, Srikakulam and Vishakhapatnam district from 29th Feb.

Do-It-Yourself (DIY):

- DIY lab conducted a training of 15 student participants from Pratham Education Foundation on 21st February.
- Total 9 sessions were conducted for regular students with cumulative attendance of 92 students. Students learnt basic programming using Arduino micro-controller, making of simple electronics circuit, CAD with SolidWorks beta app for animation etc.

I] Make-a-thon for rural girls (La Fondation):

A Make-a-thon for girls studying in Science College was conducted from 5th to 9th February. It was 4th batch in the series of 5 make-a-thon under La-Fondation (Dassault systems) support. Total 26 girl students from Bhartiya Jain Sanghatana (BJS) College of Arts, Science, and Commerce, Wagholi (Pune) attended hands-on learning session based on digital fabrication and solar energy.



J] Other tit-bits:

- Marathi Wikipedia Update: Team completed scanning of 12 magazines (96 pages) and proof-reading for 6 books (163 pages).
- Ranajeet and Prachi attended brain storming workshop at BAIF on 20th Feb. They also met and discussed about dsttara.in website with Dr. Anuradha Pogat of DST-SEED division.

పలాస సైన్స్ ప్రాజెక్టుకు ప్రథమ స్థానం

పలాస, ఫిబ్రవరి 29. (ప్రభస్వ్యాస్): జాతీయ సైన్స్ దినోత్సవం సందర్భంగా టెక్నాలజీ ఐతమ్ ఇంజనీరింగ్ కళాశాలలో ఎటిఎల్ఎస్ ఇన్స్టిట్యూట్ చాలంజ్ సెనెన్స్-2 విభాగంలో జరిగిన పోటీలలో పలాస ఎటిఎల్ సైన్స్ ప్రాజెక్టు ప్రథమ స్థానంలో నిలిచింది. ఈ పోటీలలో జిల్లాకు చెందిన 29 టీంకరింగ్ ట్యూప్పాల్సగా పలాస ఎటిఎల్ బి.గాయత్రి, జస్వంత్ పాత్రో, కె.గౌతమ్, గైడ్ టీచర్ షణ్ముఖరావులు తయారు చేసిన ఉమన్ సేఫ్టీ స్పార్లవర్ స్క్రీన్ అనే ప్రాజెక్టుకు ప్రథమ బహుమతి లభించింది. పలాస ప్రాజెక్టు కు ప్రథమ బహుమతి రావడంతో



ప్రధానోపాధ్యాయులు డి.దాశరథి, ఉపాధ్యాయులు విద్యార్థులకు, గైడ్ టీచర్లు అభినందనలు తెలియజేశారు.

- iii. 5th February: Team from M/S MAHLE Engineering Services India-CSR team visited Pabal to review progress of workshop & electrical lab upgradation and new project proposals for next financial year.
- iv. Akshada Thorat resigned from soil-chemistry laboratory assistance position for better career opportunities. We wish her best luck for future endeavours.
- v. Yogesh attended Finance committee meeting of IIE on 28th Feb.
- vi. Weather record – Rainfall of the month – 0 mm (Total: 478.72 mm), Max temp-34.00° C, Min Temp –11.00° C, Humidity –72%, Water height in well– 3.00 M.
- vii. Energy consumption record- Electricity unit – III Phase-908 units, I Phase import-75 units, Solar generation-798 units. DG used – 8:00 Hrs, Biogas- 56.20 m³ (dung used 1124 kg)
- viii. Animal Husbandry section update – Milk production – 564.9 Kg (Gross profit Rs: 2390.00). Poultry- 41 eggs incubated.
- ix. Online visitors: www.dsttara.org – 981(Organic search-771, Direct search-220), www.vigyanashram.com – 1957 (Organic search- 1101, Direct search- 852). Campus tour visitors –241



MAHLE CSR team @ Vigyan Ashram

KJ Data Report: <https://shorturl.at/cknNW>

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Photo Gallery:



Projects made in Nellore Make-a-thon



MAHLE team visit to review project progress



Show case for EDP : Made by DBRT students
The showcase made using playwood and new tools
purchased for Workshop



DBRT : Preparing for mulberi plantation



Food Stall @ Pabal Yatra on 22nd – 23rd Feb



Visit of VA team to CNC setup of AISSMS Engg College



Faculty visit of MMCOE, Pune to Vigyan Ashram

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